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## CLAIMS:

1. A method of moving a given set of trains from their respective origins to their respective destinations, said method comprising the steps of:

- 5 (i) form a schedulable set of trains consisting of all trains not at their destination that have at least one unoccupied link;
- (ii) from this schedulable set select the train with the earliest start time from its current location, wherein this selected train is travelling from station  $S_i$  to station  $S_j$ ;
- 10 (iii) form a contender set of trains consisting of all trains that have as their next move a dispatch from station  $S_i$  to  $S_j$  and vice-versa;
- (iv) from this contender set select the train with the earliest arrival time at its successor station (either station  $S_i$  to  $S_j$ );
- 15 (v) for the selected train invoke a deadlock avoidance procedure wherein if this procedure accepts the train then go on to step (iv), or if the train is rejected then remove it from the schedulable set, and if the schedulable set is not empty then return to step (ii) otherwise go to step (vii);
- (vi) schedule the selected train over its chosen link to its successor station; and
- 20 (vii) return to step (i) until all trains are at their destination or the schedulable set is empty.